Funding Opportunities:

Next Generation Software Program

Information Technology Research Program

Dynamic Data Driven Application Systems Thrust

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Supporting Dynamic Execution Environments: Next Generation Software Program(NGS)

NGS Scope: design methods composition, and runtime support of complex applications with end-to-end performance, on distributed heterogeneous platforms, including Grids, GiBs, & embedded systems

Program Components:

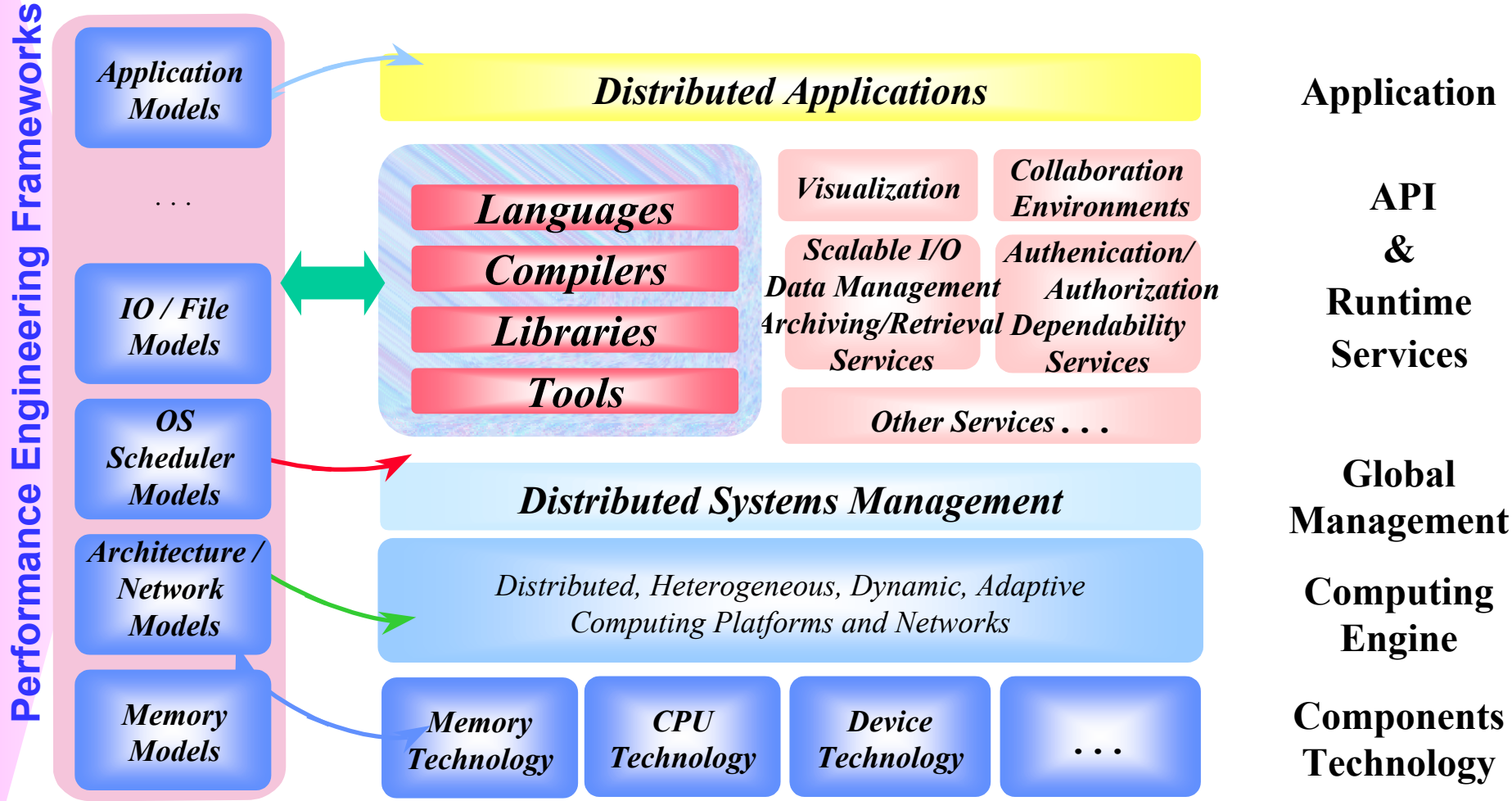
TPES (Technology for Performance Engineered Systems)

and

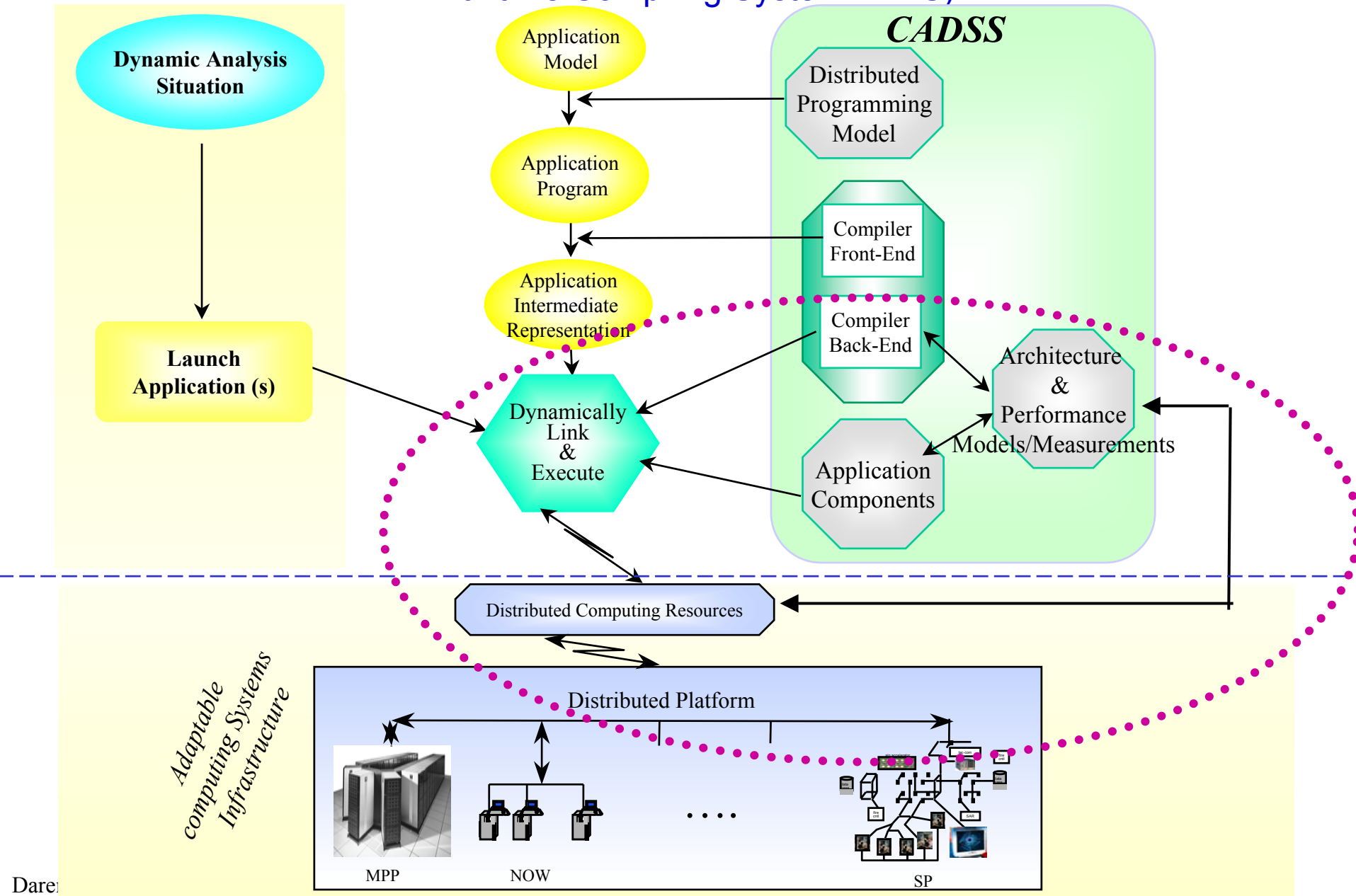
CADSS (Complex Application Development and Support Systems)

- TPES: Methodology for performance engineered computing systems (end-to-end performance analysis&prediction)
  - performance frameworks, multilevel models for analysis and prediction
- CADDS: Use of performance technology in a new software architecture for application development and run-time support
  - new dynamic (autonomic) compilation/run-time system technology
  - application composition technology

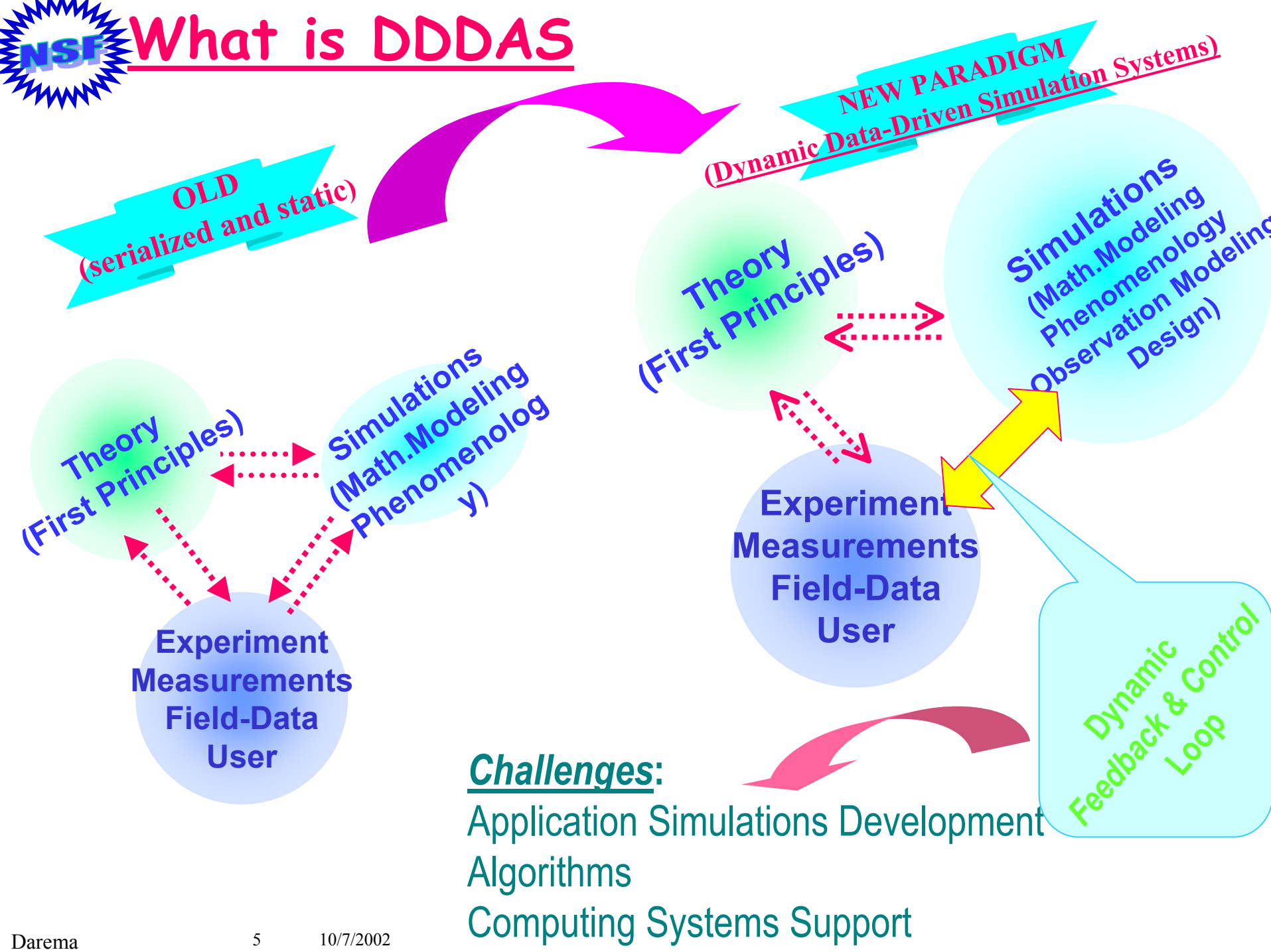
TPES
Technology for Performance Engineered Systems



CADSS: Complex Application Development and Support
(integrated feedback and control compiling system Runtime Compiling System - RTS)



What is DDDAS

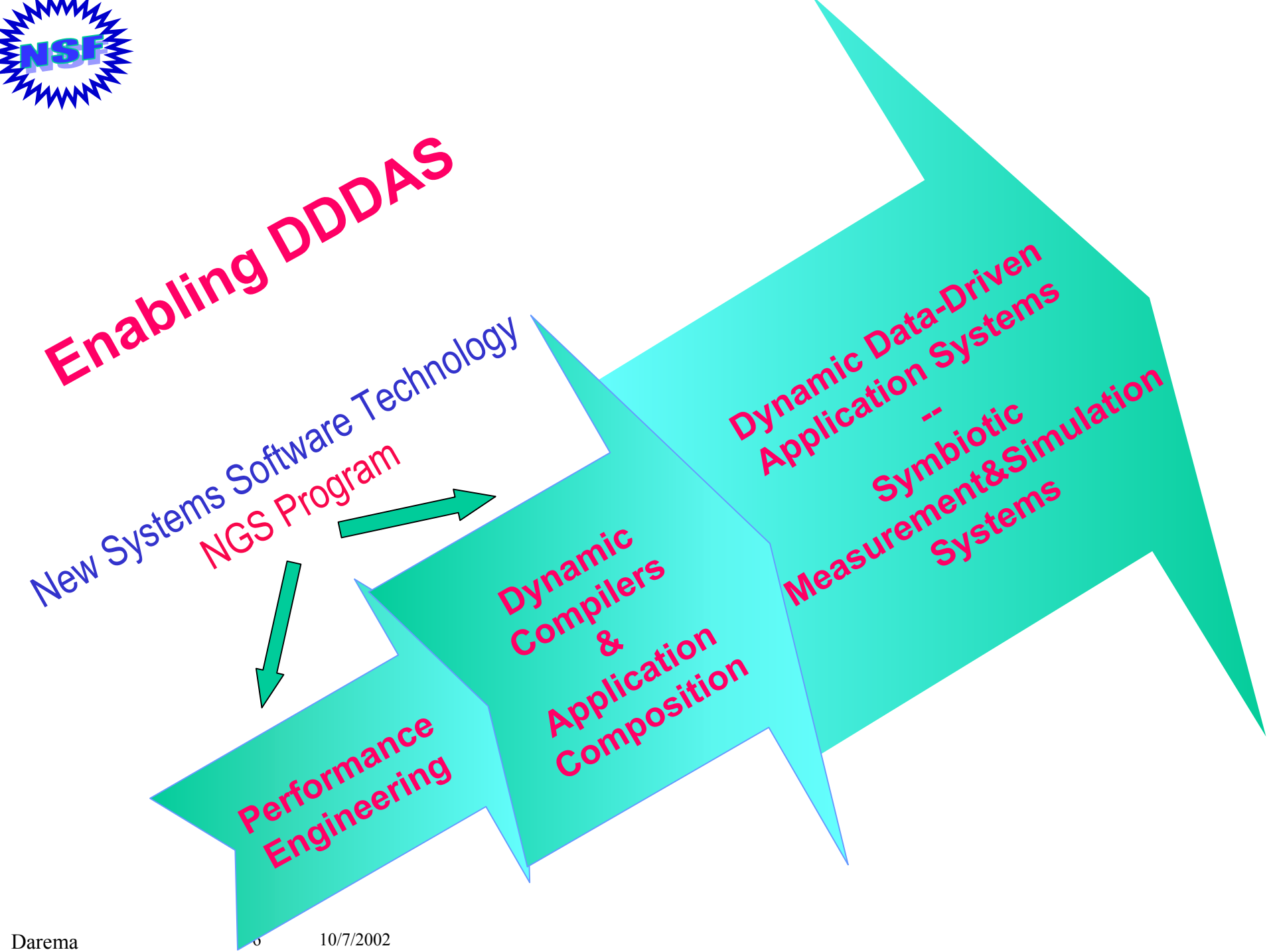


Challenges:

Application Simulations Development

Algorithms

Computing Systems Support


Enabling DDDAS
New Systems Software Technology
NGS Program
Performance Engineering
Dynamic Compilers & Application Composition
Dynamic Data-Driven Application Systems -- Symbiotic Measurement&Simulation Systems

Information on these opportunities

- ***Next Generation Software Program (NGS)***
  - ***http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf01147***
- ***Information Technology Research Program***
  - ***http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf02168***
- ***Dynamic Data Driven Application Systems Thrust (DDDAS)***
  - ***http:/www.cise.nsf.gov/eia/DDDAS***
  - ***http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf02168***
- ***AND:***
  for <u>NGS & DDDAS</u> proposals submitted to ITR, state
  <u>ACIR</u> (Division) and <u>NGS</u> as the holding program